

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1-34. (Canceled)

35. (Currently Amended) A recombinant DNA comprising a polynucleotide of ~~any one of claims 47-54~~ claim 47, which is connected to a regulation sequence that will express the polynucleotide in a sense direction.

36-38. (Canceled)

39. (Currently Amended) A method for producing 2-hydroxyisoflavone synthase comprising culturing a host cell that contains a ~~polynucleotide-recombinant DNA~~ according to ~~any one of claims 47-54~~ claim 35.

40-46. (Canceled)

47. (Previously Presented) An isolated polynucleotide having a sequence that codes for the protein of SEQ ID NO:2, or a variant of said protein that catalyzes the synthesis of 2-hydroxyisoflavanone from flavanone in leguminous plants, or a complementary polynucleotide thereto.

48. (Previously Presented) The isolated polynucleotide of claim 47, which codes for SEQ ID NO:2, or a polynucleotide complementary thereto.

49. (Currently Amended) The isolated polynucleotide of claim 47, having the ~~having the~~ sequence of nucleotides 144 - 1712 of SEQ ID NO:1, or a polynucleotide complementary thereto.

50. (Previously Presented) The isolated polynucleotide having the sequence of SEQ ID NO:1, or a polynucleotide complementary thereto.

51. (Previously Presented) The isolated polynucleotide of claim 47, which codes for the protein of SEQ ID NO:2, or a variant of said protein that catalyzes the synthesis of 2-hydroxyisoflavanone from flavanone in leguminous plants.

52. (Previously Presented) The isolated polynucleotide of claim 48, which codes for SEQ ID NO:2.

53. (Currently Amended) The polynucleotide of claim 49, ~~having the~~ having the sequence of nucleotides 144 - 1712 of SEQ ID NO:1.

54. (Previously Presented) The polynucleotide of claim 50, having the sequence of SEQ ID NO:1.

55. (New) The isolated polynucleotide of claim 47, wherein in said variant 1 to 20 amino acids of SEQ ID NO:2 have been substituted, deleted or added.

56. (New) The isolated polynucleotide of claim 47, wherein in said variant 1 to 10 amino acids of SEQ ID NO: 2 have been substituted, deleted or added.

57. (New) The isolated polynucleotide of claim 47, wherein in said variant 1 to 5 amino acids of SEQ ID NO: 2 have been substituted, deleted or added.

58. (New) The isolated polynucleotide of claim 47, wherein in said variant 1 to 20 amino acids of SEQ ID NO: 2 are substituted.

59. (New) The isolated polynucleotide of claim 58, wherein the variant contains 1 to 20 amino acid substitutions selected from the group consisting of between any one of Ala, Val, Leu and Ile, between Ser and Thr, between Asp and Glu, between Asn and Gln, between Lys and Arg and between Phe and Tyr.

60. (New) An isolated polynucleotide comprising at least one of (a) a nucleic acid sequence encoding 2-hydroxyisoflavone synthase, said nucleic acid sequence having at least 70% homology to nucleotides 144-1712 of SEQ ID NO: 1, and (b) a complement of said nucleic acid sequence.

61. (New) The polynucleotide of claim 60, said nucleic acid sequence having at least 80% homology to nucleotides 144-1712 of SEQ ID NO: 1.

62. (New) The polynucleotide of claim 60, said nucleic acid sequence having at least 90% homology to nucleotides 144-1712 of SEQ ID NO: 1.

63. (New) The polynucleotide of claim 60, said nucleic acid sequence having at least 95% homology to nucleotides 144-1712 of SEQ ID NO: 1.

64. (New) The polynucleotide of claim 60, said nucleic acid sequence having nucleotides 144-1712 of SEQ ID NO: 1.

65. (New) A recombinant DNA comprising a polynucleotide of claim 60, which is connected to a regulation sequence that will express the polynucleotide in a sense direction.

66. (New) A method for producing 2-hydroxyisoflavone synthase comprising culturing a host cell that contains a recombinant DNA according to claim 65.

67. (New) A recombinant DNA comprising a polynucleotide of claim 47, which is connected to a regulation sequence that will express the polynucleotide in a sense direction.

68. (New) A method for producing 2-hydroxyisoflavone synthase comprising culturing a host cell that contains a recombinant DNA according to claim 67.